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Current Support Brief

COMMUNIST CHINA PURCHASES SWISS MACHINE TOOLS



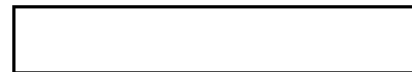
CIA/RR CB 64-26

April 1964

CENTRAL INTELLIGENCE AGENCY

Office of Research and Reports

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W A R N I N G

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COMMUNIST CHINA PURCHASES SWISS MACHINE TOOLS

In September and October 1963 the Chinese Communists placed orders totaling \$2.6 million for several types of precision machine tools with four Swiss manufacturers. All the types of tools ordered are in short supply throughout the Bloc, and some of the large gear-grinding and gear-cutting machine tools that are contained in the order remain embargoed to the Bloc under COCOM regulations. These tools, to be delivered for the most part during 1965-66, will give a significant boost to China's metalworking technology and will give China an improved capability to manufacture not only complex types of heavy precision industrial machinery but also the components and nonelectronic instrumentation needed for advanced weapons systems.

Several types of precision machine tools were ordered, including (1) machines for making small precision gears, (2) large gear-cutting and gear-grinding machines suitable for gears up to 142 inches in diameter, (3) internal grinders suitable for production of miniature bearings, and (4) cam-cutting machines. The first type produces fine-pitch precision gears suitable for precision timing devices, recording instruments, and missile and torpedo guidance systems. The second type produces gears suitable for production or maintenance of high-speed power transmissions such as those used in rolling mills, turbine engines, and reduction gears for turbine generators and marine engines. The largest gears that the Swiss equipment could produce, 142 inches in diameter, would be suitable for large marine propulsion units capable of transmitting more than 20,000 horsepower.

The large gear-cutting and gear-grinding machines will make Communist China more nearly self-sufficient in producing industrial machinery. Although China claims a high degree of self-sufficiency in producing such machinery, it has only a limited capability to produce quality machinery involving large, high-speed gears. The Swiss machine tools will give a substantial boost to such capability. Other models that were included in the orders, such as machines for producing fine-pitch gears and internal grinders for miniature bearings, also would decrease China's dependence on outside help and potentially would support the carrying out of high-priority military production programs.

Although the number of machine tools involved is not large -- a total of 64 units -- the orders are significant in view of the precision types that are involved. Moreover, the purchase represents a major

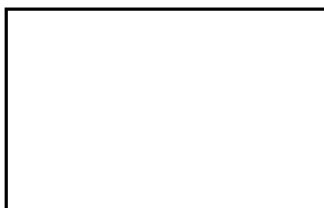
increase above the volume of imports in recent years. China has purchased small numbers of precision machine tools from Switzerland in the past, the two highest years being 1958, when China purchased \$1.7 million of all types of machine tools from Switzerland, and 1959, when purchases amounted to \$3.4 million. In more recent years, imports have dropped drastically, falling to \$270,000 in 1962. The present orders, all of which but about 10 percent are to be delivered in 1965 and 1966, would imply yearly outlays of about \$1.2 million during each of two years for these orders alone. In view of the low stage of the industrial development of China, this level of sales does not compare unfavorably with Swiss exports of all types of machine tools of \$7.3 million to the UK, \$10.8 million to Japan, and \$5.2 million to the USSR in 1961.

After the collapse of the "leap forward" and the ensuing stagnation in the machine building industries, the Chinese Communists had little need to import precision tools. Now, however, increased imports of precision machine tools lend weight to the view that recent purchases of Western machinery and equipment indicate that some recovery of Chinese industry is about to take place. The manufacture of machine tools of the quality and precision of those ordered from the Swiss will long be beyond the capability of the Chinese machine tool industry. For such tools the Chinese will be dependent on imports for years to come.

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Analysts:

Coord:

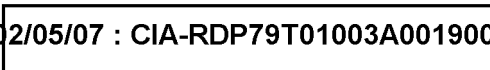


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30 April 1964

MEMORANDUM FOR: Chief, Dissemination Control Branch, DD/CR
FROM : Chief, Publications Staff, ORR
SUBJECT : Transmittal of Material

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It is requested that the attached copies of CIA/RR CB 64-26,
Communist China Purchases Swiss Machine Tools, April 1964,
 be forwarded as follows:

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State, INR Communications Center,
Room 7818, State Dept. Bldg.
Suggested distribution for Embassies
in Canberra, Hong Kong, and Tokyo

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ACTION COMPLETED

The dissemination requested by
this memorandum has been completed.

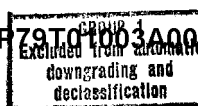
BY: *NDB*

Date: *1 May 64*

Attachments:

Copies #203 - #205 of CB 64-26

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